What is claimed is:

1.

A method of detecting impaired glucose tolerance of individuals by evaluation of β-cells secretory capacity, comprising:

infusing the individual with glucose and a glucagon-like peptide-1 or its biologically active analogues; and thereafter

measuring the response against standard responses of healthy subjects to determine if the individual has impaired β-cell function.

2.

The method of claim 1 wherein the receptor-binding compound is selected from (a) a peptide which comprises the amino acid sequence of glucagon-like peptide-1, and (b) a variant peptide comprising an amino acid sequence that differs from the sequence of glucagon-like peptide-1 by one or more substitutions, deletions or insertions.

3.

The method of claim 2 wherein the receptor binding compound is glucagon-like peptide-1.

4.

The method of claim 2 wherein the receptor binding compound is glucagon-like peptide-1 (7-37) which has the sequence His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly (SEQ. ID NO:3).

5.

The method of claim 2 wherein the receptor binding compound is glucagon-like peptide-1 (7-36) amide which has the sequence His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg (NH_2) (SEQ. ID NO:4).

6.

The method of claim 2 wherein the receptor binding compound is a variant peptide in which the combination of the substitutions, deletions and insertions in the amino acid

sequence does not differ by more than ten amino acids from the amino acid sequence of glucagon-like peptide-1.

7.

The method of claim 1, further comprising an agent which enhances the half-life *in vivo* of the compound.

8.

The method of claim 1 wherein the receptor binding compound is expressed by a polynucleotide.

9.

The method of claim 1 wherein the patient is simultaneously infused with a combined glucose/GLP-1 or its biologically active analogue.

10.

The method of claim 1 wherein the patient is first infused with glucose and then later with GLP-1.

11.

The method of claim 1 wherein the dose of GLP-1 is a bolus dose intravenously administered at from .05 nmol to 100 nmol.

12.

The method of claim 1 wherein the dose is a bolus subcutaneous method at from 10 nmol to 1000 nmol.

13.

The method of claim 1 wherein the patient is infused with a dose of GLP-1 or a biologically active analogue continuously infused by I.V. at from 0.1 pmol/kg/min to 10 pm/kg/min.

14.

The method of claim 1 wherein dosing is continuous subcutaneous infusion at a dose of from 0.5 to 50 pm/kg/min.